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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/553,511

06/23/2006

Takeshi Takizaki

38893

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03/02/2009

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EXAMINER

VAN, QUANG T

ART UNIT

PAPER NUMBER

3742

NOTIFICATION DATE

DELIVERY MODE

03/02/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patdocket@pearne.com
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<i>Office Action Summary</i>	Application No.	Applicant(s)	
	10/553,511	TAKIZAKI ET AL.	
	Examiner	Art Unit	
	Quang T. Van	3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2008.
2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-10 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 21 November 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/12/2009</u> . | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Nobue (JP 2003-308962) (cited by the applicant). Nobue shows a high frequency heating apparatus in that a microwave of 5.8 GHz (see paragraph [0052]) is irradiated to an object in a heating chamber 15 in order to heat the object; wherein a plurality of pieces of wave guides 13, 14 having feeding ports for emitting the microwave are mounted to a cavity partitioning the heating chamber (see Figures 1-8 and the English abstract).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 3-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nobue (JP 2003-308962, in view of Yamada (JP 2-244589) or Smith (US 3,210,511).

As set forth above, Nobue shows a microwave oven with waveguides having a plurality of ports for feeding a microwave at 5.8GHz into the oven chamber. It differs in only the exact locations of the ports. Yamada shows a microwave ovens with a waveguide 6 connected to a magnetron 5 for feeding microwave into the oven chamber 1 through two ports 3, 3a. The ports may be located in different locations along the side of the oven chamber or the ceiling of the chamber (see Figures 1-2 and the English abstract). Smith also shows a microwave oven having waveguides 12 and 13 with ports 17 and 18 for feeding microwave into different locations of the oven (see Figures 1-3 and col. 1, line 47 – col. 2, line 42). It would have been obvious to an ordinary skill in the art at the time of invention to modify Nobue to locate the ports at various different locations of the chamber walls for more uniform microwave field distribution to achieve more even and better heating result, in view of the teaching of Yamada or Smith. The exact locations and number of ports would have been a matter of engineering expediciencies depending on the desired heating modes and can be determined by an ordinary artisan through routine experimentation.

Response to Amendment

6. Applicant's arguments filed 9/30/2008 have been fully considered but they are not persuasive.

7. Applicant argues Nobue does not disclose a high frequency heating apparatus comprising a plurality of feeding ports for emitting the microwave and mounted to the wave guides. The Nobue's device comprises only one feeding port 62 (Nobue; Figure 8). This is not found persuasive. Nobue shows a high frequency heating apparatus in that a microwave of 5.8 GHz (see paragraph [0052]) is irradiated to an object in a heating chamber (15, Figure 1) in order to heat the object; wherein a plurality of pieces of wave guides (13, 14, Figure 1) having feeding ports for emitting the microwave are mounted to a cavity partitioning the heating chamber (see Figures 1-8 and the English abstract).

With regard to claim 3, Applicant argues none of Nobue, Yamada and Smith discloses, teaches, or renders obvious that the at least two pieces of waveguides are arranged at an upper wall of the cavity. This is not found persuasive. Nobue disclosed, figure 1, the waveguides (13-14) are arranged from the upper wall to lower wall of the cavity (figure 1). Yamada's microwave generating device comprises one wave guide at the ceiling (upper wall) of the device (Figure 2b) and also at the other location different than the upper wall (Figures 1 and 2a). Smith's microwave oven comprises one waveguide at the ceiling (upper wall) of the oven, and the other waveguide at the different location of the oven (see Figures 1-3 and col. 1, line 47 – col. 2, line 42). Therefore, it would have been obvious to an ordinary skill in the art at the time of invention to modify Nobue to locate the ports at various different locations of the chamber walls for more uniform microwave field distribution to achieve more even and better heating result, in view of the teaching of Yamada or Smith. The exact locations

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and number of ports would have been a matter of engineering expediencies depending on the desired heating modes and can be determined by an ordinary artisan through routine experimentation. Further, reference Lee (US 5,981,928) has been cited to show that, at least two pieces of waveguides are arranged at an upper wall of the cavity (42, 44 of figure 3), is well known in the art.

With regard to claim 6, applicant argues that none of Nobue, Yamada and Smith discloses, teaches, or renders obvious that a wide range waveguide in a shape of a parallelepiped constituted by including a number of feeding ports is provided on a rear side of the heating chamber. This is not found persuasive. Since Nobue, Yamada and Smith disclosed locate the ports at various different locations of the chamber walls for more uniform microwave field distribution to achieve more even and better heating result. The exact locations and number of ports would have been a matter of engineering expediencies depending on the desired heating modes and can be determined by an ordinary artisan through routine experimentation.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Lee (US 5,981,928) discloses a microwave dispersing apparatus of microwave oven.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quang T. Van whose telephone number is 571-272-4789. The examiner can normally be reached on 8:00Am 5:00Pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tu Hoang can be reached on 571-272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Quang T Van/
Primary Examiner, Art Unit 3742
February 24, 2009

Quang T Van
Primary Examiner
Art Unit 3742